

**REMARKS:****REMARKS REGARDING CLAIMS AMENDMENTS:**

Claims 1, 4, and 6 have been amended to claim a monovalent cation containing well fluid comprising a single brine system and an amount of starch derivative.

Claims 7 and 8 were previously canceled.

Claims 11-18 are new. Claims 11-18 do not present new matter, and are supported by the specification. The examples found in the specification support the overall concentration of the brine system in the well fluid.

**IN RESPONSE TO THE OFFICE ACTION:****REJECTION UNDER 35 U.S.C. § 112:**

Claims 1-6, 9, and 10 have been rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of Applicant's presently claimed invention. Applicant has amended Claims 1, 4, and 6 to further clarify that the recited well fluid comprises a single brine system and an amount of starch derivative, wherein the single brine system consists essentially of at least 0.6 equivalents per liter of a water soluble monovalent cation salt.

Applicant submits that the above amendment overcomes the rejection of the claims under 35 U.S.C. § 112, second paragraph, and thus ask that the Examiner reconsider and withdraw the rejection of the claims and indicate allowance in the next paper from the Office.

Examiner has also objected to recitation of the phrase "wherein the monovalent cation salt is substantially free of divalent cations" in Claims 1, 4, and 6. Applicant respectfully directs Examiner's attention to numbered paragraph [0015], wherein Applicant specifically defines this phrase to include the divalent cations which are unavoidably and unintentionally entrained and dissolved in the recited well fluid. This term is both defined in the specification and well understood by one of ordinary skill in the art. Accordingly, recitation of this phrase does not render the claims vague and confusing.

In view of the above, Applicant requests the reconsideration and withdrawal of the rejection of claims 1-6, 9, and 10 under 35 U.S.C. § 112, and ask that the Examiner indicate the allowance of the claims in the next paper from the Office.

**REJECTION UNDER 35 U.S.C. § 102:**

Claims 1-6 have been rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 5,804,535 to Dobson et al. (Dobson.) Applicant requests that the Examiner reconsider and withdraw the rejection in view of the following.

For there to be anticipation under 35 U.S.C. § 102, "each and every element" of the claimed invention must be found either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051,

1053 (Fed. Cir. 1987) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571, 230 U.S.P.Q. 81, 84 (Fed. Cir. 1986) ("absence from the reference of any claimed element negates anticipation."); *In re Schreiber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d 1429, 1431 (Fed. Cir. 1997). As pointed out by the court, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp. V. Lydall, Inc.*, 159 F.3d 534, 545, 48 U.S.P.Q. 2d 1321, 1328 (Fed. Cir. 1998). See also *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q. 2d 1655, 1657 (Fed. Cir. 1990).

Dobson does not teach each and every element found in the claims. Dobson is generally directed to a well drilling and servicing fluid comprising a brine system having dissolved therein a formate salt selected from the group consisting of potassium formate, cesium formate, and mixtures thereof. Dobson also discloses that the well drilling and servicing fluid that may also contain a biopolymer viscosifier such as xanthan gum, as well as bridging agents, weight materials,...and the like. (Dobson, Col. 3, Lns. 64-65; Col. 6, Lns. 28-35).

Dobson fails to disclose or suggest a *brine system* consisting essentially of a monovalent cation salt, wherein the anion of the salt is a halide. Examiner indicates that because the bridging agent is a component of the drilling fluid, and the bridging agent may be potassium chloride, then the brine system consists essentially of water and potassium chloride. Examiner draws this conclusion because some of the potassium chloride presumably dissociates into the brine system. Applicant respectfully disagrees with Examiner's conclusion that the brine system of Dobson consists essentially of water and potassium chloride. Dobson requires the brine to contain potassium or cesium formate. (Dobson, Col. 6, Lns. 13-15). Dobson specifically discloses that the bridging agent of the well drilling fluid must not be appreciably soluble in the liquid used to prepare the fluid, citing potassium chloride as a suitable bridging agent. (Dobson, Col. 6, Lns. 43-45). This is because Dobson does not wish the bridging agent to dissociate and interfere with the formate ions of the brine system, which would result in precipitate formation. Dobson clearly

outlines that this is an undesirable effect. (Dobson, Col. 6, Lns. 21-27). The Common Ion Effect further supports the conclusion that the brine system of Dobson does not consist essentially of water and potassium chloride. The Common Ion Effect states that the dissociation of a weak electrolyte is inhibited by adding to the solution a strong electrolyte that has an ion in common with the weak electrolyte. In this case, the weak electrolyte is the potassium chloride of the bridging agent, which has a solubility of 35.5, and the strong electrolyte is the potassium formate of the brine system, which has a solubility of 331. (CRC Handbook of Chemistry and Physics, 83<sup>rd</sup> Ed., p. 4-76, 2002). The common ion is potassium. The solubility of potassium formate is greater than the solubility of potassium chloride by a factor of ten, which will drive the equilibrium concentration of the potassium chloride to the left. Because the dissociation of the potassium chloride is inhibited by the potassium formate, the brine system of Dobson cannot consist essentially of water potassium chloride.

Dobson also does not disclose or suggest the high shear rate viscosity found in the claims. Examiner admits as much in the First Office Action, dated May 4, 2006. In that Office Action, Examiner indicated that Dobson would inherently have the same rheological and physical properties because the Dobson well drilling fluid allegedly has the same composition as the well drilling fluid of the present invention. (First Office Action, Item 4, Page 4). Applicant respectfully disagrees with Examiner's conclusion. As discussed above, Dobson and the present invention have different brine systems, thereby resulting in different compositions. Therefore, Dobson cannot have the same rheological and physical properties as the drilling fluid of the present invention. Consequently, Dobson does not teach each and every element found in the claims.

In view of the above, Applicant requests the reconsideration and withdrawal of the rejection of claims 1-6 under 35 U.S.C. §102 and ask that the Examiner indicate the allowance of the claims in the next paper from the Office.

\*\*\*\*\*

REJECTION UNDER 35 U.S.C. § 103:

Claims 9 and 10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dobson. Applicant requests that the Examiner reconsider and withdraw the above rejection of the claims in view of the following.

A determination under 35 U.S.C. §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *In re Mayne*, 104 F.3d 1339, 1341, 41 U.S.P.Q. 2d 1451, 1453 (Fed. Cir. 1997). An obviousness determination is based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 U.S.P.Q. 459, 467 (1966), see also *Robotic Vision Sys., Inc. v. View Eng'g Inc.*, 189 F.3d 1370, 1376, 51 U.S.P.Q. 2d 1948, 1953 (Fed. Cir. 1999).

In line with this standard, case law provides that "the consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q. 2d 1529, 1531 (Fed. Cir. 1988). The first requirement is that a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 U.S.P.Q. 2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 1000, 50 U.S.P.Q.2d 1614, 1617. The second requirement is that the ultimate determination of obviousness must be based on a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 903-904, 7 U.S.P.Q. 2d 1673, 1681 (Fed. Cir. 1988); see also *In re Longi*, 759 F.2d 887, 897, 225 U.S.P.Q. 645, 651-52 (Fed. Cir. 1985). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q. 2d 1780, 1783-84 (Fed. Cir. 1992).

The Examiner bears the burden of establishing a *prima facie* case of obviousness. *In re Deuel*, 51 F.3d 1552, 1557, 34 U.S.P.Q. 2d 1210, 1214 (Fed. Cir. 1995). The burden to rebut a

rejection of obviousness does not arise until a prima facie case has been established. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q. 2d 1955, 1957 (Fed. Cir. 1993). Only if the burden of establishing a prima facie case is met does the burden of coming forward with rebuttal argument or evidence shift to the applicant. *In re Deuel*, 51 F.3d 1552, 1553, 34 U.S.P.Q. 2d 1210, 1214 (Fed. Cir. 1995), see also *Ex parte Obukowicz*, 27 U.S.P.Q. 2d 1063, 1065 (B.P.A.I. 1992).

Claims 9 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Dobson. As discussed above, Dobson fails to disclose or suggest a well fluid that consists essentially of an aqueous monovalent brine system and an amount of a starch derivative, wherein the aqueous monovalent brine system consists essentially of a water soluble monovalent cation salt, and wherein the anion of the salt is a halide. Therefore, Dobson fails to disclose or suggest all the limitations recited by Applicant. As such, Dobson cannot reasonably be found to obviate Applicant's presently claimed invention.

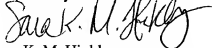
Given the above, Applicant requests that the rejection of claims 9 and 10 under 35 U.S.C. §103(a) be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

\*\*\*\*\*

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 13-3082, Order No. PA-00404US.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,



Sara K. M. Hinkley  
Associate Patent Counsel, M-I L.L.C.

Reg. No. 55849  
Tel. 281 561 1459

Date: ~~February 20, 2007~~ March 13, 2007